

USA tomatoes

LESS IS MORE Reducing fertiliser use



Unilever California Tomatoes Nutrients mean plant growth

Nutrient inputs are vital for all crops. Fertilization and crop demand must be in balance. Nutrients are lost at harvest, by leaching, erosion and emissions to air. Sustainable practices can enhance nutrient efficiency and reduce losses.

Nitrogen losses to the environment are a key environmental issue – the Gulf of Mexico 'Deadzone' is a prime example of an unintended consequence through excessive use of fertilisers in the Mississippi basin causing the loss of marine life in the Gulf. (WRI report 2006)

Benchmarking our Californian growers

In 2003 we compared our key growers' nitrogen fertilization rates and found that application rates could differ by almost 200%. The largest nitrogen fertilizer input for processing tomatoes occurs at side dressing when plants are 4 to 6 inches tall.

A common held belief is that the more nitrogen applied the higher the yield – this however is not totally true, as excesses are lost to the environment. Much of the nitrogen needed by tomato crops is 'free' – either from a previous crop in the rotation, the atmosphere, or by nutrient producing bacteria in the soil. The trick is to know how much 'free' nitrogen exists already, and to balance any additional crop needs with synthetic fertilisers.

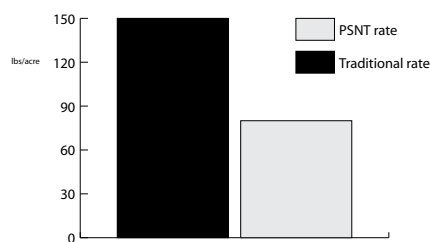
Knowing how much Nitrogen to apply

Since 2004 we have been working with a number of our growers to optimise nitrogen usage by tomatoes. One of the techniques we have applied is a pre-side dressing nitrogen soil test for nitrogen levels (PSNT).

On the basis of this soil test, nitrogen applications to tomato seedlings are adjusted to exactly what the plant needs taking in to consideration the 'free' nitrogen in the soil.

Good for the environment and the farmers pocket

So far results indicate that nitrogen reductions of up to 50% can be achieved, without damaging the yield. Not only is this reduction good for the environment, but it also means farmers save money by applying less fertiliser – a great win/win for all.



We continue to work with all of our growers – spreading these farmer derived results to them all.



PSNT application

Work in partnership with:

- UC Davis Extension network
- Muller brothers farm

For more information please contact:
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The tomatoes in this story can be found in:

